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Mauna Loa Solar Observatory Observer's Log  
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Fri Jan 26 17:18:50 GMT 2007

Year: 07 Doy: 026

Observer: yasukawa

WEATHER COMMENT: Fri Jan 26 17:19:05 GMT 2007

Clear, SE wind 12 mph, temp 35 F.

\_\_\_\_end\_\_\_\_

Fri Jan 26 17:24:34 GMT 2007 CHIP Start Patrol

Fri Jan 26 17:24:46 GMT 2007 PICS Start Patrol

SBM COMMENT: Fri Jan 26 17:25:28 GMT 2007

Observing

\_\_\_\_end\_\_\_\_

PSPT COMMENT: Fri Jan 26 17:25:37 GMT 2007

Starting up.

\_\_\_\_end\_\_\_\_

PSPT COMMENT: Fri Jan 26 17:33:52 GMT 2007

Observing.

\_\_\_\_end\_\_\_\_

A NEW TAPE HAS BEEN PUT INTO KAIEE DLT DRIVE, Fri Jan 26 17:42:16 GMT 2007

Fri Jan 26 17:51:57 GMT 2007 MKIV Start Patrol

Fri Jan 26 17:54:25 GMT 2007 MKIV End Patrol

\*\*MKIV PROBLEM\*\*: Fri Jan 26 17:54:37 GMT 2007

Mk4 startup failed at ReadKCC waiting (on cmdtool). did an "end4"  
on nahenahe.... no response. Killing and restarting.

Also reset KCC. Problem may have been precipitated by my wiggling  
cables and tapping on boards looking for any looseness that may be  
causing the intermittent negative signal Joan alerted us to. Nothing  
appeared loose, by the way.

\_\_\_\_end\_\_\_\_

Fri Jan 26 17:56:24 GMT 2007 MKIV End Patrol

Fri Jan 26 17:56:38 GMT 2007

MkIV

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Mauna Loa Solar Observatory Observer's Log  
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Fri Jan 26 17:56:52 GMT 2007

Year: 07 Doy: 026

Observer: yasukawa

Fri Jan 26 18:01:42 GMT 2007 MKIV Start Patrol

Fri Jan 26 18:02:38 GMT 2007 CHIP End LSD

Fri Jan 26 18:02:44 GMT 2007 CHIP BiasLSD

Fri Jan 26 18:03:23 GMT 2007 CHIP End BiasLSD

Fri Jan 26 18:03:29 GMT 2007 CHIP Bias

Fri Jan 26 18:03:38 GMT 2007 PICS End Flat

Fri Jan 26 18:03:43 GMT 2007 PICS ReStart Patrol

Fri Jan 26 18:04:19 GMT 2007 CHIP End Bias

Fri Jan 26 18:04:31 GMT 2007

MkIV

Fri Jan 26 18:04:24 GMT 2007 CHIP ReStart Patrol

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Mauna Loa Solar Observatory Observer's Log

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Fri Jan 26 18:10:58 GMT 2007

Year: 07 Doy: 026

Observer: yasukawa

Fri Jan 26 18:11:00 GMT 2007 PICS Start Patrol

Fri Jan 26 18:14:08 GMT 2007 MKIV Start Patrol

**\*\*MLSO PROBLEM\*\***: Fri Jan 26 18:11:35 GMT 2007

Did a soft shutdown of nahenahe, paused PICS, CHIP, and SBM due to guiding shutdown during KCC power down. PICS and CHIP crashed, did not endPatrol. Powered KCC back up, Killed and restarted PICS and CHIP, rebooted nahenahe. Restarted SBM.

Restart attempt on MK4 failed again.

KCC appears crashed.

\_\_\_end\_\_\_

**\*\*MKIV PROBLEM\*\***: Fri Jan 26 18:50:53 GMT 2007

Checked out KCC control panel functions. Appears DC motor drive functions work, stepper motor functions do not--Barrel & tilt plate.

\_\_\_end\_\_\_

**\*\*MKIV PROBLEM\*\***: Fri Jan 26 19:49:47 GMT 2007

Power supplies to stepper interface box measured OK.

\_\_\_end\_\_\_

**\*\*MKIV PROBLEM\*\***: Fri Jan 26 19:57:48 GMT 2007

Barrel pulses are not being produced at KCC/signal transformation board.

Checked pins at J6 on STB and see no pulses that should be going up to Stepper motor tranceivers

\_\_\_end\_\_\_

**\*\*MKIV PROBLEM\*\***: Fri Jan 26 20:17:52 GMT 2007

I believe that the problem resides in a faulty VMIC 2540 Intelligent Counter/Controller board in the KCC. Appears that there are no pulses coming out of the board, probed at J6 on the STB, which is essentially a pass-thru to the mechanisms on the spar.

This might explain the negative images seen on MK4, reported by Joan, as the FLC also gets timing signals from the VMIC 2540. I am also seeing no pulses at the 1/rot-64/rot test points which also reside on J6. I do not see the 1/rot and 64/rot pulses at the back of the KCC rack (digital isolator panel) which has me a bit puzzled at this time.

\_\_\_end\_\_\_

Fri Jan 26 20:34:47 GMT 2007 MKIV End Patrol

**\*\*MKIV PROBLEM\*\***: Fri Jan 26 21:00:33 GMT 2007

MK4 down for now.

\_\_\_end\_\_\_

Fri Jan 26 23:21:06 GMT 2007 MKIV Start Patrol  
Fri Jan 26 23:28:26 GMT 2007 MKIV Start Patrol  
\*\*MKIV PROBLEM\*\*:

Fri Jan 26 23:28:49 GMT 2007

MK4 back up!

Thanks to David's review of the relationship between the 1/2-wave plate pulses and the output pulses from the VMIC 2540 board, I found a flaky connector that provided +12VDC in to the encoder electronics. Secured it temporarily and saw the 64/rot pulses reappear. Reset KCC. Started MK4 patrol--all appears well now. This may be the cause of the negative images Joan was seeing too.

\_\_\_\_end\_\_\_\_

Fri Jan 26 23:41:23 GMT 2007 MKIV End Patrol  
Sat Jan 27 00:01:47 GMT 2007 MKIV Start Patrol

NICE MK4 IMAGE: 2337

NICE CHIP IMAGE: 1901

NICE PICSLIMB IMAGE: 2006

NICE PICSDISC IMAGE: 1902

\*\*MKIV PROBLEM\*\*:

Sat Jan 27 01:45:48 GMT 2007  
scan just went negative, but that was caused by a static discharge between me and the OCP frame.

\_\_\_\_end\_\_\_\_

Sat Jan 27 02:29:43 GMT 2007 CHIP End Patrol

Sat Jan 27 02:30:35 GMT 2007 PICS End Patrol

Sat Jan 27 02:38:03 GMT 2007

MkIV

00_01.rawmk4	00_37.rawmk4	01_12.rawmk4	01_47.rawmk4	02_22.rawmk4
00_04.rawmk4	00_40.rawmk4	01_15.rawmk4	01_50.rawmk4	02_25.rawmk4
00_07.rawmk4	00_42.rawmk4	01_18.rawmk4	01_53.rawmk4	23_28.rawmk4
00_10.rawmk4	00_45.rawmk4	01_21.rawmk4	01_56.rawmk4	23_31.rawmk4
00_13.rawmk4	00_48.rawmk4	01_24.rawmk4	01_59.rawmk4	23_37.rawmk4
00_16.rawmk4	00_51.rawmk4	01_26.rawmk4	02_02.rawmk4	23_45.rawmk4
00_19.rawmk4	00_54.rawmk4	01_29.rawmk4	02_05.rawmk4	23_51.rawmk4
00_22.rawmk4	00_57.rawmk4	01_32.rawmk4	02_08.rawmk4	23_57.rawmk4
00_25.rawmk4	01_00.rawmk4	01_35.rawmk4	02_11.rawmk4	c23_41.rawmk4
00_28.rawmk4	01_03.rawmk4	01_38.rawmk4	02_13.rawmk4	c23_48.rawmk4
00_31.rawmk4	01_06.rawmk4	01_41.rawmk4	02_16.rawmk4	c23_54.rawmk4
00_34.rawmk4	01_09.rawmk4	01_44.rawmk4	02_19.rawmk4	